

## WHAT IS CLAIMED IS:

1. A sample drying device comprising:
  - a channel for a sample flowing in said channel; and
  - a sample drying area having an opening communicating with said channel, wherein said sample drying area comprises a fine channel narrower than said channel.
2. A sample drying device comprising:
  - a main channel for a sample flowing in said main channel;
  - a plurality of side channels branched from said main channel; and
  - a sample drying area communicating with said side channels, wherein said sample drying area has a fine channel narrower than said side channels.
3. The sample drying device as claimed in Claim 2, wherein said sample contains multiple components and said main channel comprises a separating portion to separate said components.
4. The sample drying device as claimed in any of Claims 1 to 3, wherein said sample drying area comprises a plurality of protrusions separated each other.
5. The sample drying device as claimed in Claim 4, wherein said drying area has a shape so that the top of said sample drying area projects from said opening.

6. The sample drying device as claimed in any of Claims 1 to 5,  
wherein said sample drying area is filled with multiple particles.
7. The sample drying device as claimed in any of Claims 1 to 6,  
wherein said sample drying area is filled with a porous material.
8. The sample drying device as claimed in any of Claims 1 to 7,  
wherein said sample drying area has a lid comprising a fine channel  
communicating with said outside of said sample drying device.
9. The sample drying device as claimed in any of Claims 1 to 8,  
wherein said sample drying device comprises a temperature controller  
for controlling a temperature of said sample drying area.
10. A mass spectrometer comprising a sample drying area included in said  
sample drying device as claimed in any of Claims 1 to 9, as a sample  
holder.
11. A mass spectrometry system comprising:  
separating unit separating components in a biological sample by their  
molecular sizes and properties;  
pretreatment unit pretreating said sample separated by said separating  
unit including enzymatic digestion;  
drying unit drying the pretreated sample components; and  
mass spectrometry unit conducting mass spectrometry for the dried  
sample,  
wherein said drying unit comprises said sample drying device as claimed

10 in any of Claims 1 to 9.